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FIG. 2A is a perspective view which illustrates a closed state of a screen of one embodiment of an electronic device which is provided with a multi-segment housing.

FIG. 2B is a perspective view which illustrates the state of using a joining structure to open the multi-segment housing of the electronic device which is illustrated in FIG. 2A and of formation of a single screen on a flat surface.

FIG. 3A is a perspective view which illustrates two housing segments of a multi-segment housing of one embodiment in a state superposed and closed.

FIG. 3B is a perspective view which illustrates the state of sliding of the two housing segments which are illustrated in FIG. 3A using a shaft of the joining structure.

FIG. 3C is a perspective view which illustrates the state of rotation of one of the two housing segments which are illustrated in FIG. 3B by 180 degrees with respect to the other by using the shaft of the joining structure.

FIG. 3D is a perspective view which illustrates the state of making one housing segment which is illustrated in FIG. 3C rotate by 180 degrees to make the display surfaces of the two housing segments flat.

FIG. 4A is a front view of one embodiment of a first housing segment.

FIG. 4B is a right side view of the first housing segment which is illustrated in FIG. 4A.

FIG. 4C is a front view of one embodiment of a second housing segment.

FIG. 4D is a right side view of the second housing segment which is illustrated in FIG. 4C.

FIG. 4E is a plan view of one embodiment of a shaft of a joining structure which is built in between first and second housing segments.

FIG. 4F is a cross-sectional view along a line F-F of FIG. 4E.

FIG. 4G is a bottom view of the shaft which is illustrated in FIG. 4E.

FIG. 4I is a plan view of a slide assist member which is inserted in the shaft which is illustrated in FIG. 4E and FIG. 4G.

FIG. 4H is a cross-sectional view along a line H-H of FIG. 4G.

FIG. 4J is a cross-sectional view of the slide assist member which is illustrated in FIG. 4I.

FIG. 5A is an assembled perspective view which illustrates the state of attaching the shaft which is illustrated in FIG. 4E to the second housing segment by using the slide assist member.

FIG. 5B is a cross-sectional view which illustrates the state where the shaft which is illustrated in FIG. 4E and FIG. 4F is attached to the first and second housing segments through slide assist members.

FIG. 6A is a perspective view which illustrates the initial state of a step at which the electronic device which is illustrated in FIG. 2A is changed in form to the state which is illustrated in FIG. 2B.

FIG. 6B is a perspective view which illustrates the state of making the outside two housing segments among the four housing segments which are illustrated in FIG. 6A slide with respect to the inside two housing segments.

FIG. 6C is a perspective view which illustrates the state of completion of making the outside two housing segments among the four housing segments which are illustrated in FIG. 6B slide with respect to the inside two housing segments.

FIG. 6D is a perspective view which illustrates the state of start of making the outside two housing segments and inside

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two housing segments rotate about the shafts of their hinges from the state which is illustrated in FIG. 6C.

FIG. 6E is a perspective view which illustrates the state of further making the outside two housing segments and inside two housing segments rotate from the state which is illustrated in FIG. 6D to make them rotate by 180 degrees each.

FIG. 7A is a front view of the state which is illustrated in FIG. 6A as seen from the front.

FIG. 7B is a front view which illustrates the state of start of making the outside two housing segments and inside two housing segments rotate about the shafts of their hinges from the state which is illustrated in FIG. 7A.

FIG. 7C is a front view which illustrates the state of further making the outside two housing segments and inside two housing segments rotate from the state which is illustrated in FIG. 7B.

FIG. 7D is a front view which illustrates the state of further making the outside two housing segments and inside two housing segments rotate from the state which is illustrated in FIG. 7C to make them rotate by 180 degrees each and corresponds to FIG. 6E.

FIG. 8A is a perspective view of an electronic device which is provided with eight housing segments which is formed by joining electronic devices which are provided with four housing segments which are illustrated in FIG. 6A at end faces of sides of the housing segments which are not pulled out.

FIG. 8B is a perspective view which illustrates the state of start of making the outside two housing segments among each four housing segments which are illustrated in FIG. 8A slide with respect to the inside two housing segments in the opposite directions and corresponds to FIG. 6B.

FIG. 8C is a perspective view which illustrates the state of completion of making the outside two housing segments among each four housing segments which are illustrated in FIG. 8B slide with respect to the inside two housing segments and corresponds to FIG. 6C.

FIG. 9A is a perspective view which illustrates the state of start of making each outside two housing segments and each inside two housing segments rotate about the shafts of their hinges from the state which is illustrated in FIG. 8C and corresponds to FIG. 6D.

FIG. 9B is a perspective view which illustrates the state of further making each outside two housing segments and each inside two housing segments rotate from the state which is illustrated in FIG. 9A to make them rotate by 180 degrees each and corresponds to FIG. 6E.

FIG. 10 is an assembled perspective view which illustrates the partial structure of a joining structure of a multi-segment housing which is provided with slide assist mechanisms of another embodiment.

FIG. 11A is a side view which illustrates the first and second housing segments to which a joining structure of a multi-segment housing which is provided with slide assist mechanisms which is illustrated in FIG. 10 is attached and illustrates the state of completion of the sliding and rotating of the second housing segment with respect to the first housing segment.

FIG. 11B is a side view which illustrates the state of the second housing segment rotating with respect to the first housing segment about a shaft by 180 degrees from the state of FIG. 11A.

FIG. 12A is a side view which illustrates the operation of a joining structure of a multi-segment housing which is provided with slide assist mechanisms at the time when the second housing segment slides in a direction which approaches the first housing segment from the state of FIG. 11B.